

REMARKS

Claims 30-34, 36, 54, 55 and 57-59 are the currently active claims pending in the application. Claims 1 – 29, 35 and 56 have been cancelled, and claims 37 – 53 and 60 – 75 have been withdrawn in response to a series of restriction/election requirements.

The previous rejections of record have again been withdrawn by the Examiner in favor of new rejections based upon DiGiovanni, USP 5,237,576, taken with Swaminathan, USP 5,717,712. Claims 30, 54 and 57 have been rejected under 35 U.S.C. § 103 as being obvious over this combination of references, while claims 31, 32, 58 and 59 have been rejected over the combination of DiGiovanni, Swaminathan and Takara USP 5,646,774. Claims 33, 34, 36 and 55 have been acknowledged as containing allowable subject matter.

These rejections are respectfully traversed.

The Examiner's position with respect to DiGiovanni is erroneous. As previously pointed out to the Examiner, DiGiovanni does not disclose a short-pulse fiber laser or in fact a pulse laser of any description. Instead, it discloses a continuous wave (CW) laser. Therefore, the DiGiovanni laser *does not have a repetition rate*. Since it is lacking in any repetition rate to be stabilized, the Examiner's reliance upon DiGiovanni is totally misplaced.

The Examiner mistakenly cites to column 4, lines 63 – 65 of DiGiovanni in support of his contention that DiGiovanni discloses a short pulse fiber laser. However, this portion of the DiGiovanni description is *not* describing the DiGiovanni laser. Instead, it is describing a tunable dye laser (*not a fiber laser*) which DiGiovanni uses to manufacture the DBRs (the reflectors) for his inventive fiber laser.

Therefore, Applicants maintain their previously stated position that DiGiovanni fails to disclose, suggest or inherently include *any* relevant feature of claims 30, 54 or 57.

Swaminathan discloses a distributed feedback (DFB) laser – which is a type of diode laser, wherein the laser chip is mounted on an adapter 340 in thermal contact with a resistance heater or Peltier thermoelectric cooler. The laser here is neither a fiber laser nor a pulse laser, and therefore, like DiGiovanni, lacks a repetition rate. Further, it is not clear if there is any “enclosure” in Swaminathan, as the patent specifies external rather than internal cooling. That is, there is no “enclosure”, as opposed to a bulk package, to cool. Finally, Swaminathan is specifically directed to producing the cheapest possible system, and to this end only envisions temperature control within a 40 degree C (105 degree F) band, which would be insufficient for stabilization of any reasonably temperature sensitive laser system, and would hardly qualify as “isolation … from an external environment” as claimed. A 105 degree temperature band is *greater* than the *external* environmental temperature range in most locations.

In any case, the combination of DiGiovanni and Swaminathan cannot possibly lead to the claimed invention of claims 30 and 57 since neither patent discloses a laser having a repetition rate, whereas a key aspect of the claimed invention is repetition rate stabilization. Accordingly, the Examiner’s combination falls far short of establishing a *prima facie* showing of obviousness.

For these reasons, claims 30, 54 and 57 are immediately allowable over the applied prior art.

With respect to the Examiner’s final combination under 35 U.S.C. § 103, including Takara, there would be no point in spooling the fiber in DiGiovanni, or in adding additional

components (optical delay line or translation arm) to control repetition rate, when *DiGiovanni and Swaminathan do not have a repetition rate*. Therefore, this rejection similarly fails, and the teachings of Takara are irrelevant to those of DiGiovanni. Moreover, Takara itself teaches no temperature control or environmental isolation whatsoever.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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Date: July 2, 2007